

# ERGONOMICS PROGRAM Lesson Guide #14



# OBJECTIVES: *Upon completion of this topic you will be able to:*

- Describe the purpose of the Navy's Ergonomics Program.
- Define ergonomics.
- Identify the elements of the Ergonomics Program.
- Define work site analysis.
- Describe training requirements for the Ergonomics Program.

# Ergonomics Program

- This program seeks to prevent injuries and illnesses by applying ergonomic principles to identify, evaluate and control ergonomic risk factors for WORK RELATED MUSCULOSKELETAL DISORDERS (WMSD' s)
- These factors pose biomechanical stress to a worker's body as a consequence of posture and force requirements, work/rest regiments, repetition rate or other similar factors.

# **Ergonomics Program**

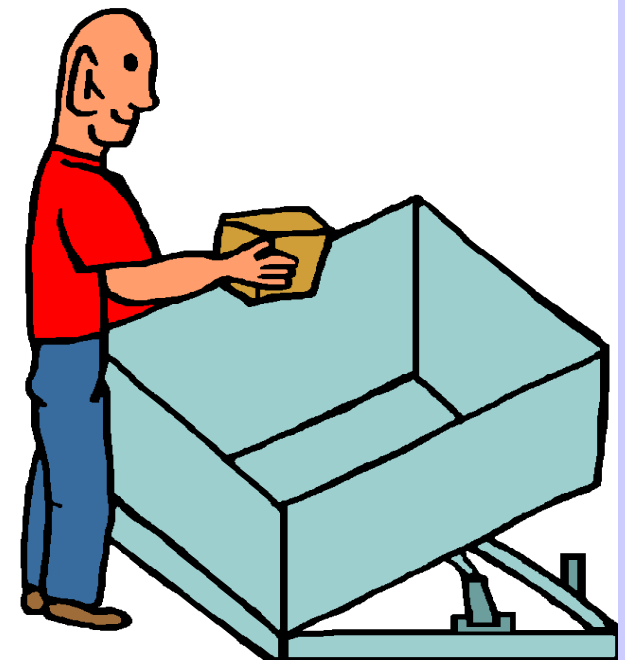
- **Includes physiological and physiological factors**
- **Examples of physiological WMSD's include**
  - **repetitive and prolong static activities**
  - **forceful exertions**
  - **awkward postures**
  - **excessive vibration from power tools or vehicles**
  - **workstations lacking adjustability**
- **Examples of physiological factors**
  - **heat**
  - **cold**
  - **other environmental extremes**
  - **shift work or extended work schedules**

# Ergonomics Program

- Ergonomics is the study of work and workplace design in relation to the physiological and psychological capabilities of people
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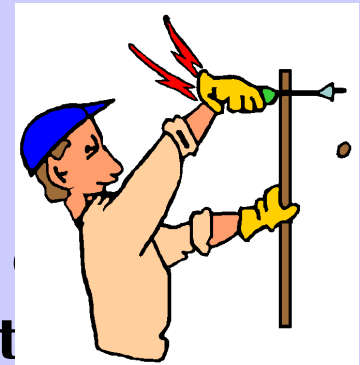


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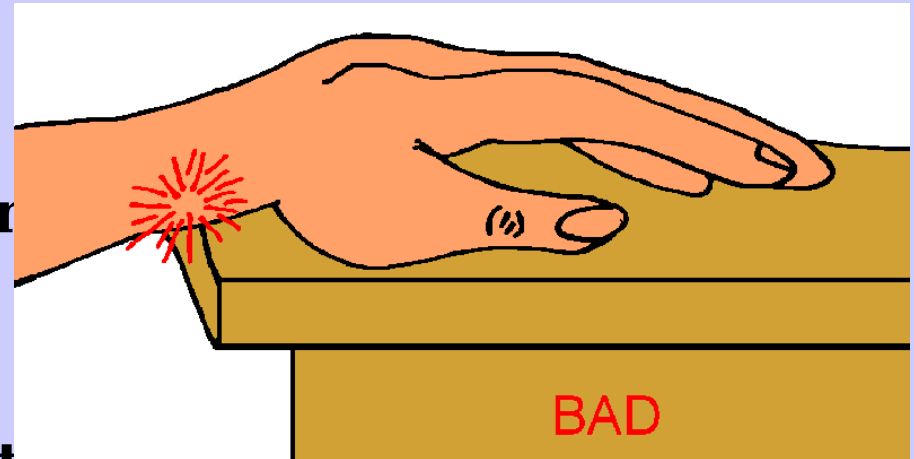
# Ergonomics Program

- WMSD's are disorders of the musculoskeletal and nervous systems, occurring in upper or lower extremity and the spine
- These injuries also include Cumulative Trauma Disorders (CTD)
  - **CTD is any combination of stresses applied to the body over a period of time from which adequate recovery does not occur.**
- Two types of CTD's
  - **repetitive stress and repetitive motion injuries (typing, using a screw driver,**
  - **sustained position injuries caused by sitting or standing in one position for long periods of time**



# Ergonomics Program

- Ergonomics Program Overexertion injuries (macrotrauma) is divided into two categories -
  - sprains and strains
    - frequency of heavy lifting
    - pushing
    - pulling
    - carrying of heavy objects
- Examples of WMSD's
  - tendinitis, tenosynovitis, bursitis
  - hand arm vibration syndrome, vibratory white finger
  - back strain, **carpal tunnel syndrome**
  - tennis elbow, golfer's elbow, trigger finger



# Ergonomics Program

- Navy ergonomics program elements are:
  - **Management commitment**
  - **employee involvement**
  - **work site analysis**
  - **hazard prevention and control**
  - **medical and case management**
  - **training**
- Case management is an important element of ergonomics
  - **staying closely involved and informed after injury**
  - **assisting employee in recovery and return to work**
  - **both for well-being of employee and control of cost**

# Ergonomics Program

- Management Commitment and Employee Involvement
  - Management Commitment
    - **Aggressive and coordinated actions to prevent WMSD's to control claims and costs**
    - **provides resources and motivation force necessary**
  - Employee Involvement
    - **identification of existing and potential hazards**
    - **development of effective abatement**
- A properly trained worker is the cornerstone of a successful in-house program.

# Ergonomics Program

- **Ergonomics Program Methods to involve employees**
  - **Properly training safety and health committees to review analyze problem areas and recommend corrective actions to management**
  - **Worker based ergo teams, with proper training**
  - **Technically qualified staff**
  - **Commanding Officer involvement**
  - **Aggressive, comprehensive, and integrated program to manage and control compensation claims, ensuring proper review, processing and administration by cognizant personnel offices**

# **Ergonomics Program**

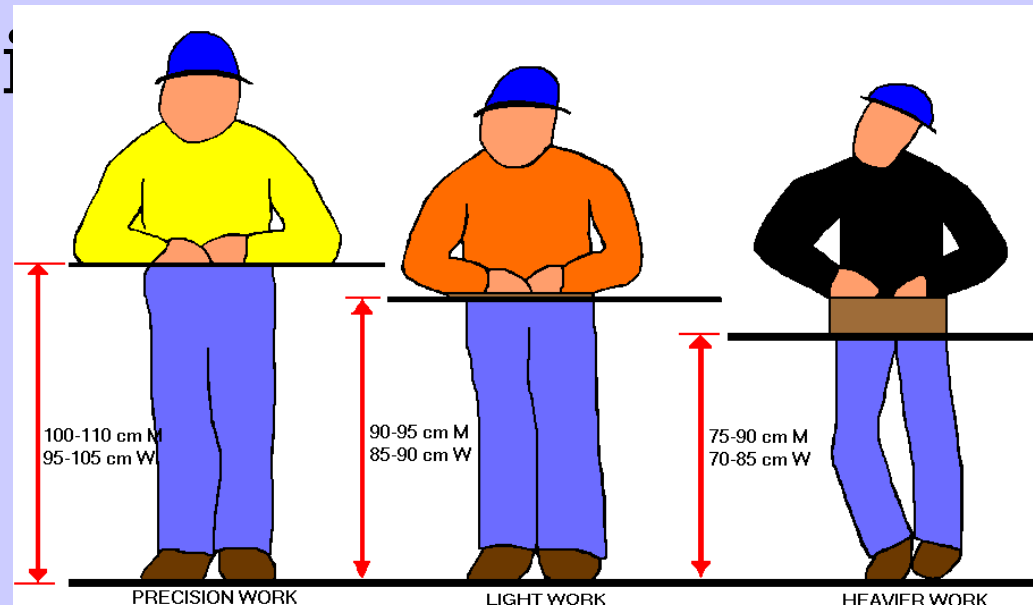
- **Work site analysis shall include:**

**part involved**

- nature of injury/illness**
- time of day**
- frequency**
- severity**
- physical location**
- cost of CTD cases**
- description of job(s)**

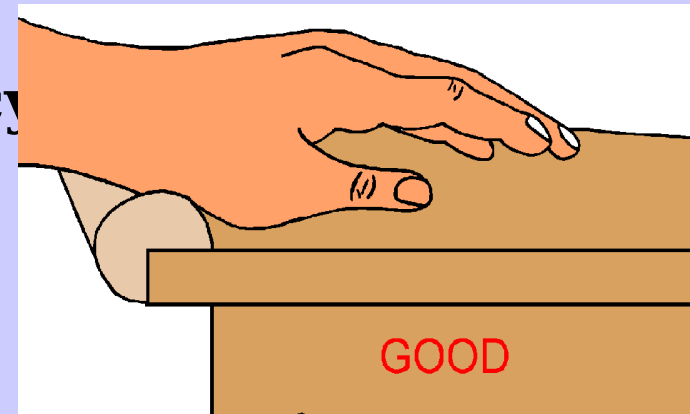
# Ergonomics Program

- **Worksite analysis shall include (Cont):**
  - absenteeism
  - personnel turnovers
  - fitness and age of worker
- **USE Appendix and 23D**



# Ergonomics Program

- **Correcting ergonomic problems include**
  - **process elimination**
  - **engineering controls**
  - **substitution of materials/tools/equipment**
  - **improved work practices**
  - **administrative controls**
    - **lifting restriction**
    - **adjustment of work-rest cycle**
    - **slowing work pace**
    - **job rotation**



# **Ergonomics Program**

- **Ergonomics Program NOTE: Activities shall not use back support belts or wrist splints as personal protection devices in the prevention of back or wrist injuries.**
- **These devices are considered medical appliances, and must be prescribed by a credentialed health care provider who shall assume responsibility for medical clearance, proper fit of the devices, and treatment, monitoring and supervision of the wearer.**

# **Ergonomics Program**

- **TRAINING**

- **Ergonomic definition and concepts**
- **CTD and back injury prevention**
- **Varieties of CTD and causes**
- **Ergonomics of hand tools**
- **Equipment design**
- **Proper maintenance of facilities, equipment, and tools**
- **Risk factor identification/performance analysis**
- **Effective case management**
- **Safe and unsafe ergonomic behaviors of employees**
- **Basic structures of the body, how they work, how they are affected by ergonomically related disorders**
- **Benefits of team approach**

# **Ergonomics Program**

- **TARGETED TRAINING**
  - **Anatomy and physiology to explain how the back works**
  - **Biomechanics of lifting and lifting techniques**
  - **How to avoid back injuries**
  - **Weight control and physical fitness**
- **Activities shall determine training requirements for MANAGERS, SUPERVISORS, EMPLOYEES, OCCUPATIONAL SAFETY AND HEALTH PROFESSIONAL STAFF, HEALTH CARE PROVIDERS, FACILITIES**
- **NAVOSHENVTRACEN offers a one week NAVY ERGONOMICS PROGRAM (A-493-0085)**

# REVIEW AND SUMMARY

